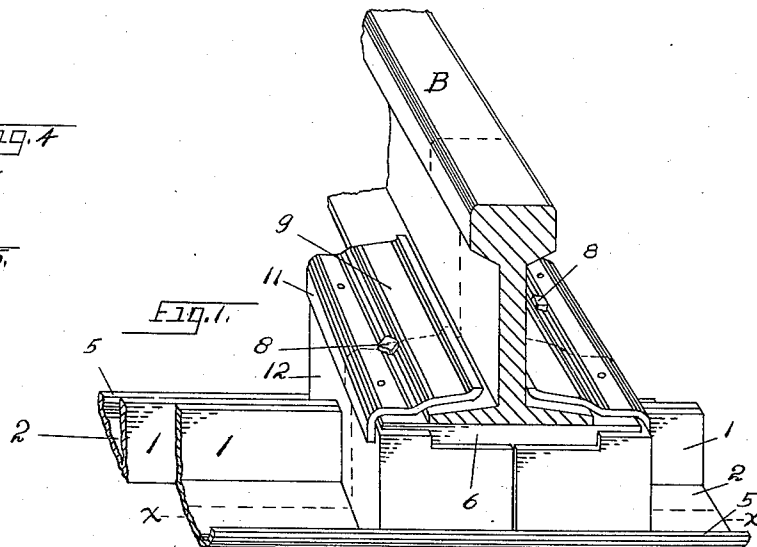
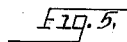
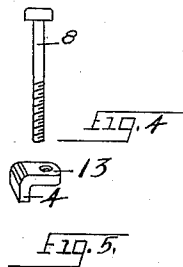
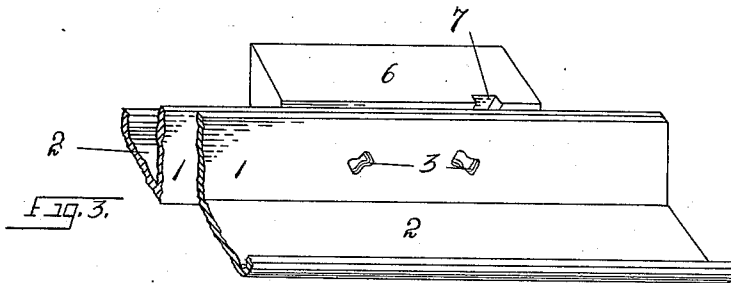
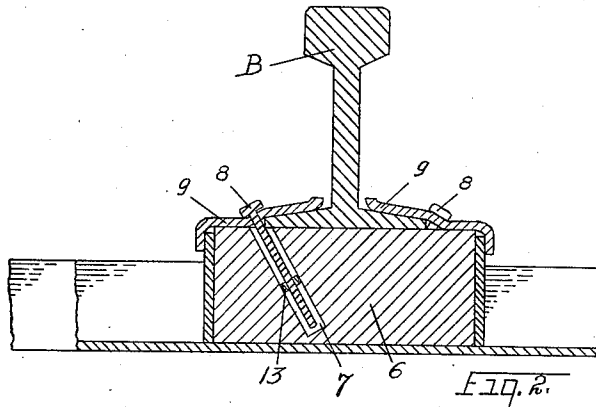


J. T. CLARK.
RAILWAY TIE AND FASTENER.
APPLICATION FILED APR. 29, 1912.

1,045,513.

Patented Nov. 26, 1912.

2 SHEETS-SHEET 1.



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C. Crank,

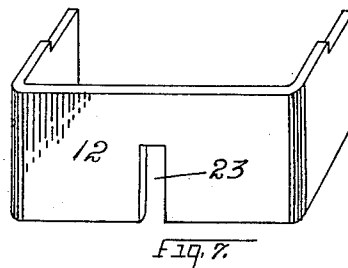
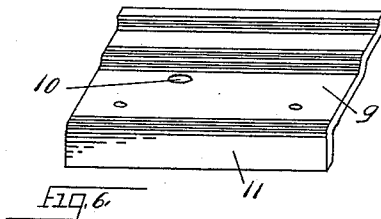
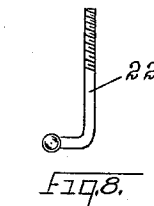
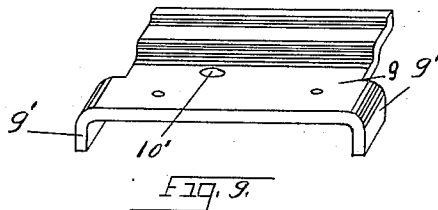
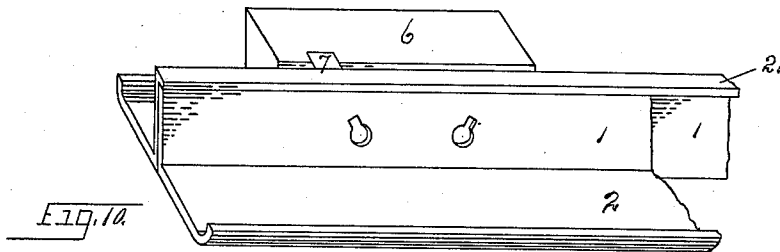
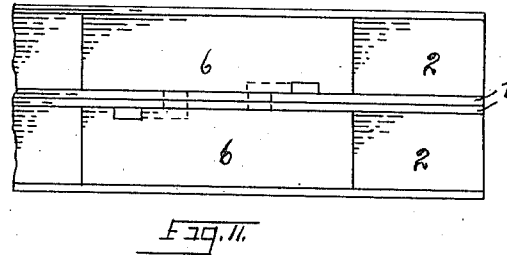
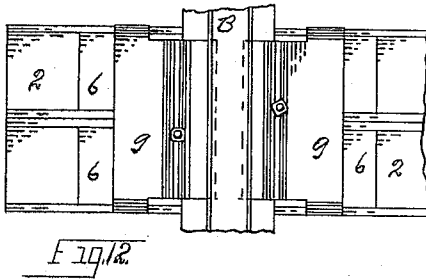
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2 SHEETS—SHEET 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

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RAILWAY-TIE AND FASTENER.

1,045,513.

Specification of Letters Patent.

Patented Nov. 26, 1912.

Application filed April 29, 1912. Serial No. 694,007.

To all whom it may concern:

Be it known that I, JOHN T. CLARK, a citizen of the United States, residing at Provo city, in the county of Utah and State of Utah, have invented certain new and useful Improvements in Railway-Ties and Fasteners, of which the following is a specification.

My invention relates to metallic ties and fasteners therefor and has for its object to provide a metal tie having a broad bearing cushioned surface for the rails to rest on.

A further object is to provide a tie made of secured together portions which will not be so rigid as the ordinary metallic tie and also to provide a longitudinally and vertically adjustable fastening means whereby a rail on the tie may be longitudinally or vertically changed as desired without disturbing the tie on the road bed.

This and other objects which will be apparent I accomplished with the tie and fastener illustrated in the accompanying drawings in which similar letters of reference indicate like parts throughout the several figures, and as described in the specifications forming a part of this application.

In the drawings Figure 1 is a perspective view of one end of the tie with a part of a rail secured thereon with my fasteners. Fig. 2 is a vertical section of line X X of Fig. 1. Fig. 3 is a view in perspective of one end of the tie with the cushion block shown on one side but removed on the other. Fig. 4 is a plan of one of the bolts. Fig. 5 is a view in perspective of one of the threaded locking nuts. Fig. 6 is a view in perspective of one of the rail clamps. Fig. 7 is a view in perspective of one of the block clamps. Fig. 8 is a modified form of one of the bolts. Fig. 9 is a view in perspective of a modified form of one of the rail clamps. Fig. 10 is a view in perspective of a modified form of holding the tie parts together, and the rail on the tie. Fig. 11 is a plan showing a modified form of the cushion block. Fig. 12 is a plan of the modified form of my tie and fasteners with a portion of a rail thereon.

My tie is formed by detachably securing two angle irons together, one portion being vertical and marked 1 and the other horizontal in position on the road bed and marked 2. The two vertical portions 1 have slots 3 cut therein at an angle to the main body of the tie. Said vertical portions 1 are placed contiguously and are firmly secured together by one edge of the locking nuts 13 being extended and bent at practically right angles to the body of the nut to form a lug 4. The extended portion of each of said nuts 13 and the lug 4 thereon is to be inserted through one of the said slots 3, and when said nut is drawn in contact with the arcuate side of said slot 3 the two angle irons will be thereby firmly held together and form an inverted T-shaped tie. The outer edge of each of said horizontally placed portions 2 are bent vertically upward as a flange 5 thereon. The purpose being to strengthen the said horizontal portion 2 and to provide an engagement for the cushion blocks 6. On each end of each of said horizontal portions 2 is placed one of said cushion blocks 6 having apertures 7 cut therein to receive the said locking nuts 13 and the threaded bolts which are to be secured within said nuts. The said cushion blocks 6 extend above the vertical portions 1 of said angle irons to prevent the rails B from contacting with said angle irons and to supply the cushion effect which is so much desired under the rails. A rail engaging clamp 9 having a hole 10 therein is placed in gripping contact with the base flange of said rail, and with a portion of said clamp resting on said cushion blocks 6. Another portion of each of said clamps 9 is bent at right angles thereto as at 11, and is placed over the upper edge of an inclosing U-shaped block clamp that is placed contiguous to the ends and sides of said cushion blocks 6. In each of said U-shaped block clamps an open cut 23 is provided, within which the vertical portion 1 of said angle irons is to be inserted when said U-shaped block clamps are placed in position adjacent said blocks. A square head is used on said

bolts 8 and the portion having threads thereon is inserted through the said hole 10 in each of said clamps and the threaded end of said bolt is screwed into one of said nuts

5 13. The position of the said hole 10 and of the said opening 3 within which the engaging nut is fitted, unless for shifting purposes, is placed at practically 45°. When said bolt is screwed within said nut the
10 tendency is to draw the said clamp 9 toward and down on the flange of the rail, and when the respective parts of the opposite side of the rail is similarly operated the clamp on that side will be drawn at right
15 angles to the motion of the opposing clamp. The longer sides of said slots 3 are cut arcuate in form and this allows the said nut 13 when fastened in said slot by the bolt 8 to be tilted, which tilting permits the said
20 cushion blocks 6, block clamps 12 and clamps 9 being shifted to adjust the rails B laterally on the tie; also to allow said rail to be raised for shimming up or bushing between the rail and the cushion blocks.

25 A modified form of portion 1 of one of the angle irons is shown in Fig. 10 where said portion 1 is extended above the contiguous portion 1 on the other angle iron and bent at right angles to form the flange
30 21. A modified form of the slot 3 is also shown in said Fig. 10 wherein a modified form of bolt 22 may be used, in the use of this form of bolt the nut engages on the top of clamp 9. If desirable a modified
35 form of clamp 9 may be used as shown in Fig. 9. The depending lugs 9' are bent downward on the ends of said clamps 9 instead of on the side as at 11.

Having thus described my invention, I desire to secure by Letters Patent and claim:—

40 1. A railway tie and fastener consisting of two angle irons contiguously placed to form an inverted T-shaped member and provided with registered opening therethrough;
45 cushion blocks on each end thereof; clamps on said blocks adapted to grip the base flange of a rail and having an opening therein; and means to hold said angle irons together and said clamps in gripping
50 contact with the base flange of a rail.

2. A railway tie and fastener consisting of two angle irons contiguously placed to form an inverted T-shaped member and provided with registered openings there-
55 through; cushion blocks on each end thereof; clamps on said blocks adapted to grip the base flange of a rail and having an opening therein; and means to hold said angle
60 irons together and said clamps in gripping contact with the base flange of a rail; said means consisting of a threaded bolt, and a nut having a lug formed thereon adapted to be placed within the registered openings in said angle irons.

3. A railway tie and fastener consisting 65 of angle irons detachably secured together in an inverted T-shape, and having registering openings therein; a cushion block placed on each end of each of said angle
70 irons adapted to support a rail thereacross; a clamp resting on said blocks and having a portion thereof bent to engage the base flange of said rail and provided with an opening therethrough; means for securing
75 said angle irons together and said clamps in gripping contact with the base flange of a rail.

4. A railway tie and fastener consisting of angle irons detachably secured together and having registering openings therein; a 80 cushion block placed on each end of each of said angle irons adapted to support a rail thereacross; a clamp resting on said blocks and having a portion thereof bent to engage the base flange of said rail and provided 85 with openings therethrough; means for securing said angle irons together and said clamps in gripping contact with the base flange of a rail, which means consists of a threaded nut having a portion thereof bent 90 as a lug and a threaded bolt screwed through said clamp and into said nut.

5. A railway tie and fastener consisting of angle irons detachably secured together with two of the sides contiguous and having 95 registered openings through said contiguous sides; upturned flanges on the edges of the outer sides of said angle irons; cushion blocks placed on said angle irons between said contiguous sides and said flanges; a 100 lock nut within each registered opening in said angle irons; a rail clamp having a portion bent to engage the base flange of a rail and having openings therethrough; block
105 clamps adapted to engage the end and a portion of the side of each of said blocks and having an open slot cut in the longer side thereof; a threaded bolt adapted to be inserted through one of the openings in said
110 rail clamp and into said nut.

6. A railway tie and fastener consisting of angle irons detachably secured together in an inverted T-shape; a cushion block placed on each end of each of said angle
115 irons adapted to support a rail thereon; a clamp resting on said blocks and having a portion thereof bent to engage the base flange of said rail; means which co-act in securing said angle irons together and said
120 clamps in gripping contact with the base flange of a rail.

7. A railway tie and fastener consisting of angle irons detachably secured together in an inverted T-shape; a cushion block placed on each end of each of said angle 125 irons adapted to support a rail thereon; a clamp resting on said blocks and having a portion thereof bent to engage the base

flange of said rail; means which co-act in
securing said angle irons together and said
clamps in gripping contact with the base
flange of a rail, which means consists of a
5 threaded bolt and a nut having a lug formed
thereon adapted to be placed within the reg-
istered openings in said angle irons and to
have said bolt screwed therein.

In testimony whereof I have affixed my
signature in presence of two witnesses.

JOHN T. CLARK.

Witnesses:

BEN L. CORUM,
J. J. CORUM.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
